



Environmental Education Summit

June 1 & 2, 2004

Provided by Dee Hansford Consulting
and the Kolbe Company

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Outreach Strategy 1 - <i>Awareness Campaign</i> - Designed to work in conjunction with a community-based social marketing campaign, an awareness campaign would emphasize the important role California families play in preserving California's natural resources. The primary objective is to increase public understanding, awareness, & support of the California Department of Fish & Game's mission. This campaign is an ideal opportunity to be pro-active rather than reactive, especially as it relates to issues in the media.	16

Outreach Strategy 2 - Community-based Social Marketing- Designed to work in conjunction with the awareness campaign, a community-based social marketing campaign would be used to promote a specific behavior change amongst California families. This marketing strategy would focus on changing a negative or neutral behavior to promote a positive behavior (ie. pack out what you pack in, leave no trace behind, etc.). The objective is to encourage stewards of California's natural resources. This type of campaign can be designed to pay for itself, and the overall benefit is for the community.16

Education Outreach Strategy 1 - Recreation Users To address a broad audience of outdoor enthusiasts, a continuing tradition of stewardship may be reinforced by linking the concept of proactive involvement in sustaining resources to perpetuation of recreational opportunities. This educational outreach may be accomplished through such means as a poster campaign on public lands, "infomercials" in peer communications, and the integration of messages in social events. 17

Education Outreach Strategy 2 - Latino/Hispanic Population To address the Latino/Hispanic population, The MERITO bilingual program in place at Elkhorn Slough addresses this target audience with an emphasis on family and community involvement to build stewardship awareness. The concept of watershed is developed and reinforced through after-school programs, adult ESL programs, and special community events. 18

Education Outreach Strategy 3 - Marine Education To address the formal education audience, concepts of marine biological diversity and fishery management challenges may be communicated through materials that facilitate access to this curriculum. Publications can be created that outline marine concepts and resources linked to state education content standards. Diverse means for dissemination of materials may be considered, including the CREEC network, teacher in-services, distance learning, and site facilities 18

Education Outreach Strategy 4 – DFG Biodiversity Atlas To address the formal education audience, refine maps and text from existing Atlas of the Biodiversity of California as the basis for a biodiversity curriculum that reinforces education content standards (including map-reading skills) for students in grades 6 - 12. Partner with State Parks to promote access and use of state lands, and with California Institute for Biodiversity (Coast Alive), and others to produce teacher workshops with a bioregional educational focus..... 18

Education Outreach Strategy 5 - Biodiversity Education (Non-formal Ed) To address the non-formal education audience, development of non-formal biological diversity-based education models for interpretive centers and museums may be considered. Such effort could broaden the age ranges for curriculum use and expand stakeholders to include partners such as World Wildlife Fund. 18

New Ideas Generated on June 2 18

Which ideas and recommendations are ones your agency is already doing to some extent? 20

What partnership & funding opportunities exist?. 19

Strategies will be recommended to DFG Leadership20

Appendix

High Profile - Rick & Tony

General comments on Rick & Tony's presentation.

- Love the low tech artsy graphics
- I really like your visual aid, but it is hard to read from far away.
- Still think some focused events can be useful
- More good things get done when people aren't concerned with getting recognition. Focus on the goal - do good things for fish and wildlife, not the recognition of "Oh, DFG/Parks/etc. does that."
- I like the simple items like the garbage bag
- I like the keep it simple model
- Consider instead of giving out business cards with phone numbers, offering refrigerator magnets with the numbers along with some useful facts, like fishing seasons, reservation information hotlines, etc.
- Good point that the agency leadership did not get much training in working with the public on doing resource management
- The best public relations/big bang effort that F&G could invest in is their wardens. Get them out on to the land, interacting and educating the public. Get out of the office, out of sacramento and out onto those lands that you are charged with protecting. Most of the policy makers don't have a clue, their staff doesn't have a clue. invest in the clues. Ultimately your organization will be much more effective.
- I like your desire to partner with existing events and activities. Have you considered polling DFG grantees and contracting organizations to compile a list of all the events they present?
- funny and good you mention "add a spoke" idea such as trash bags and pick up at event. I've started plans with partnership to have pre-event trash pick up from river bank and trail by special event; heap the many bags at exhibit along bluff (where everyone walks by to enjoy the river trail) to make a dramatic point, give out SFRA bags for pickup of new litter left at event and/or to be used at later visit to river, parkway or other nature area. Plus people get the idea to simply not litter
- Who is going to implement/conduct the program?
- Cards for people to spread around when off fishing, visiting X site, or whatever: "We have come to your community to view (fish for, etc.) wildlife, and are contributing to your local economy by going to restaurants, motels, museums and (so on)...Show that we support the local economy
- Be more visible, develop relationships, attend local meetings, provide input into local processes and directly effect policy decisions at the local level. Participate in City, County and statewide planning processes and landuse decisions. Participate in General Plans, Park Management Plans, dedicate local people to these efforts. The community will start to see these people as the resources that they are. We need more LOCAL wardens.
- Water-related events: you also have a opportunity to show people how PLANTS
- Event that involves "all three"...include hunter skills? Low impact hunting...

- It would be interesting to find out what Minnesota is investing in the partnership model
- Part of the DFG mission is to protect CA's diverse plant resources. Opportunity to show how plant communities provide major services to people (e.g. filtering, erosion control of wetlands), much more. (am wearing my CNPS hat here.)
- regarding a dfg spoke to add to current events, one that could travel around and get multiple use, but also high profile, literally and educationally, for family fun, is to have a giant maze that focuses on aquatic ecology and conservation. the graphics could be interchanged, along with text plates, to target one or multiple audiences using at any given time. could be used statewide, largely a one time expense. needs local assistance (vols with dfg lead person) to set up
- How about let the local county and city parks departments tell us which ideas need attention now, and we pick and choose the ones that look to get the most bang for the buck.
- Interesting approach. No plastic bags, please. Your Biodiversity Atlas is your best opportunity. Distribute it widely; adapt to regions, age and ethnic groups. Use different media to deliver to targeted audiences. The Pacific Flyway Center in Sacramento offers the best opportunity for a "first high visibility " project. Invite Maria Schriver and Bobby Kennedy, Jr. to co-chair kickoff. Develop program from there: delivering curriculum, American River et al stewardship opportunities.
- Ohh, I like the Fish and Wildlife Wednesday concept
- consider central valley rivers for focus of water-related emphasis. growth is there. Hispanic families are there. critical/threatened watersheds are there. agencies and organizations are there or need to be there. work personal water-related safety angle as well as adopt-a-steam angle.
- F&W Wednesday is a GREAT idea! This will really show that you are "walking the talk" and sincere about the resource. And, will show public what is happening or can happen.
- The be your own partner thing could not only be good for the public, but also good for the agency folks
- If you want to spread the message to people who do not attend special events, I think the longevity of the Minnesota model is the way to go. Develop a plan to coordinate community resources all with the same message about stewardship. A concerted effort that will not change from year to year will encourage stakeholders to put effort into the program.
- Become the resource that you are set up to be. Don't just attend meetings, participate, bring problem solving skills, belong to an agency that offers its expertise to help SOLVE community environmental problems. Each staff person has the ability to participate in this way, provide incentive to existing staff. Stop spending money on expensive consultants and temporary marketing plays. Rather, hire staff on the local level, invest in each community. Get them out of the office.
- Visibility, credibility and trust are CRUCIAL - let's do it :)
- What is a wonk? Creative presentation - - good ideas.

- good presentation
- The work of the agency needs to be transparent to the public - they need to know what you do. This will help with alleviating the mystery of where tax dollars go and the suspicion that it's a waste or doing something bad.
- Very effective presentation, guys.
- There are endless opportunities in local communities for people of agencies to get involved and help. You must do so in a way that is genuine and that may not be self serving.
- I like the Wildlife Wednesday idea, but I do see how it will create a "program" in and of itself that needs to be coordinated: connecting DFG personnel with projects, volunteer groups, and media.
- Getting involved in the works of others is a great idea. Making it institutional is brilliant!
- another idea for a traveling component for the family fun, high profile and educational spoke at others' special events is to have a miniature golf course; one long twisting hole (fairway) that many people could be using at one time at spatial intervals. It would simulate a stream or river, and could be where the salmon is migrating upstream to get to its spawning grounds to lay eggs. could be another animal migrating up and/or down the coast like maine mammal or snowy tern...
- Anything that is done must look cost-effective the public. Having biologists who are highly trained fix streams doesn't seem that good. They could lead the Conservation Corps fixing of the stream. WE need more collaboration between agencies so that the public isn't paying for things over and over for little payback.
- Regarding Minnesota's program: since they have paved the way, why would it necessarily take us just as long to implement something like that?
- The professional mentoring day and the Fish and Wildlife Wednesday concepts are more inclusive and seem like they can be done statewide with just about any partner, which makes them more valuable options.
- Yes to the short term, high impact.
- Get agency folks out in the public, but also get the public into the agency (not literally, but into the work). Give people real opportunities to know what you do and why it's great. Not just leaflet with "this is what we do" but let people in to see salmon spawning and egg collection at hatcheries or hands on with tagging species, etc. But give them context to understand their participation.
- ...very stylized and shippable. It could be at so many different kinds of events (salmon golf concept)
- Coast Alive! would LOVE to participate!
- PLEASE forward this comment to Robin and Kerry on the Outreach Group...As far as not reinventing the wheel: DFG already has an employee in the communications office working on an outreach effort called 'the goodness of hunting'...Her name is Lorna Bernard, and much of what your write-up talks about has been done by her...please contact her!
- Salmon golf - again ,like the maze, a one time cost. shipping would be paid by user special event. volunteers would set up with a DFG person who is trained. Its

very attention getting, high profile with media. (from past experience) there's a company that makes mazes, Minataurin washington. also, another company makes inflatable animals to crawl in. High profile and very transportable.

- Good information about the Minnesota E. S. through Education Model
- Research interest yes, but only if faculty or grad students are informed, brought into the process, and excited.

Outreach - Robin & Kerry

General comments on Robin & Kerry's presentation.

- Who will do the research??
- Do the families themselves see the family as a learning unit?
- Have F&G staff put up the campaign billboards - hey, it's their message!
- RE: Regulations - how many of existing regs are REALLY necessary for proper mgmt, given the drop in fishing participation
- Good basic model, but not clear where/how it will get the baseline information on what will resonate with the public/local communities.
- Billboards are contrary to preserving wilderness values
- Our action phase must be more than developing another plan!!
- Like the idea of testing the model in a target community.
- What kind of timeframe is needed to get to the implementation phase?
- Potential universal theme: "home" Relating Stewardship to caring for our home
- What role would volunteers and partners play in the implementation of the effort?
- Excellent. No mention of changing the name of DFG to Department of Wildlife and Habitat. That action would help you the most in delivering your purpose and goals.
- Human-nature focus could be strengthened. There is nothing in that message that says why this is important. We are embracing upon an era where CA population growth will be clashing with our environmental needs. I personally feel that this message needs to be constructed with this situation in mind. The message in my opinion needs to focus more on the need to protect habitat corridors, the need for more information about our endangered/threatened species/why they are important to protect.
- To what extent are you trying to engage the expertise of groups who are already doing strong outreach campaigns, like Save The Bay and others? There appears to be lots of opportunity for collaboration here.
- define outreach - why is outreach important?
- Is this an ongoing process that will evolve as we move forward? Is there a plan to keep this kind of market research going?
- Good presentation. An example would have been nice to demonstrate how it might work.
- Nice presentation, well delivered
- People are not interested in agencies, organizations. They are interested in organisms so START with critters. Follow LATER with organisms---posters are

great idea if focus is on the charismatic fauna you have Fish & Game FAMILIES--great target.

- Defining the "community" can be difficult. What is the scope? What is the geographic area to be looked at?
- The name Dept of Fish and Game does not bring to mind the type of human-nature connection we need to position the Dept for in the coming years.
- I think the target audience and the message are good. But the methods of engagement seem too global and generic.
- Isn't this the basis for doing all the other projects? That is, the audience needs to tell us what they know and don't know about natural resources to allow us to interpret needed info.
- the strong piece is to focus on the family, Parents teach children, children remind parents. For TV adds, families are interacting and modeling stewardship. The model of stewardship should be representative of cultural context. Stewardship to Native Americans looks different to another group. Stewardship in Chevron's view is different than stewardship through the eyes of another group. Stewardship of the Bush administration is different from some others. A message of the Oneness.
- how do we build public trust?
- Can you outline an infrastructure to implement this process within the Department of Fish and Game?
- I've initiated pilot of river cleanup with a partnership and citizen funding preliminary plan for trash containers and pickup service, and am intrigued by social marketing. would like to read more and contacts if you have any for consultants.
- This is a very important part... without knowledge of the public perceptions, we have no realistic notion about what to do.
- Fish and Game plays a vital role that is very misunderstood and very underappreciated. The Public needs a much better understanding of "why" protecting our natural resources is important. I would like to see more emphasis on a campaign that focuses on the "why". There is a tremendous mistrust of data used to support policy decisions. The stakeholders that we are trying to influence need to be brought to table. Made to be a part of the solution.
- I think the target audience and the message are good. But the methods of engagement seem too global and generic. These are the techniques we always use and they have not been effective in the past. Given the target audience and what we need to convey, non-traditional methods need to be used. Also, the message seems to conflict with the suggested methods-- billboards would be vandalized!!!
- don't know about impacts of billboards, but I do think that regarding text, less is better

Education - David & Jenny

General comments on David & Jenny's presentation.

- we need to provide more opportunities for people (traditional users and non-users) to be involved in DFG and other resource conservation and protection

activities. This can be volunteerism and it can also just mean making DFG work more transparent to the public.

- Practical options need to anticipate the future demands. One of the biggest forcers for the future is contained in the AB1548 direction. The overarching concepts in that important legislation must be a significant part of the formal education process for K-12. This is a very important role for this education group.
- or fine the daylight out of them for non-compliance (snail spreading)
- Audiences: interesting that CA DFG itself is not considered as a separate entity
- The marketing surveys of target audiences will tell you what needs to be done. Why focus on Spanish speakers? Shouldn't surveying direct the message to particular audiences? Asian community could be most important group... more oriented to natural resource use?
- Recr. Users: goafter guides/outfitters as a discrete audience to get your messages to their clients i.e. your publics. Guides are often thought of as "experts" but lack correct info to pass on. Make them the most informed experts in California. If you make them experts in the eyes of their clients they will love you for it!
- Good overview. Especially the recreational aspect
- For Strategy #2, are you proposing this as a model to replicate?
- The Monterey Bay Area does not reflect the demographics of the remainder of the State. In the SF Bay area, the Asian population may be the most important group.
- University partnerships can help address the "why". More focus on the content of this message. Value comes from personally experience. As CA grows, how are we going to provide that practical experience to the masses that will be our audience? The legislative audience needs major attention. Glad to see it as a focus. Need to totally re-think regulatory focus. Most effected already consider themselves stewards, offended by regs.
- Strategy #1 was a bit complicated - what do you want recreation users to know that they don't already? How would you engage the volunteers and what do you envision their role to be?
- Put all your fish information at sewage treatment plants - makes the fish connection and that's where the kids are going for field trips
- very impressive bilingual effort. Would be interesting to see if any of it is having an impact.
- I'd like to see more examples of what partnerships would look like for Strategy #1.
- What's the difference between outreach and education?
- Are the latino focused efforts producing results. Are there plans to do any evaluation?
- Can be excellent integration of key conservation concepts with state standards, especially with AB1548.
- I agree that Marine is a very misunderstood ecosystem. This will be very important to develop some relevance to the public.

- Based on lunch presentation, for future formal education efforts, be aware of the incredible diversity of Gen Z.
- Marine ecosystems are important, but I think you'll get more relevance by looking at the terrestrial and freshwater aquatic ecosystems near most of the inland areas of CA.
- Preservation shouldn't be the only message.
- Your presentation highlighted the fact that there are many, many partnerships for education - this trend should continue.
- Write your own textbooks using retired "boomers" with nothing to do. If we out "cool" the textbook writers with our product (not hard) we'll be meeting everyone's needs!
- Too many details of some of the strategies, I'd like to work in partnership to develop some of these details together.
- Absolutely need to include CalEPA, Waste Management Board and Department of Education in this loop. They are integral for implementation of AB1548.
- Concern about focus on biodiversity. Reason is that biodiversity is a very fuzzy concept with those that are engaged. May be very challenging to connect folks to this concept rather than building the concept through individual species and habitats.
- For tomorrow, make sure to keep to the agenda timeline.
- CADFG has what the schools will never have - the real resource via Wild Mgmt Areas, hatcheries, etc. Use the division of labor approach to help both.
- Tremendous opportunity to get the recreational NGOs involved in the other educational strategies. Part of this would be stimulated by need to maintain acceptance of their activities.
- The Biodiversity Atlas is only a beginning. There are lots of examples or natural resource issues.
- Great idea for non-formal educators - these are collaborators that can help extend the messages into populations. These are natural partners - they want to work with you. They have the same goals (in general).
- Ed programs need to focus on the activities that these populations enjoy, ie, hispanic populations in our community tend to use our area watersheds for swimming and fishing. These populations in our communities do not go to the public pools. The education messages need to focus on those uses that these populations are familiar with and VALUE. Great work. Great partnerships, don't forget university and colleges. GIS is wonderful, use it!
- How many DFG staff know of and use CREEC as a resource??
- focus on community delivery is sound.
- For all these partnerships - perhaps there needs to be general messages that can be agreed upon by many groups.
- Involve stakeholders in the development of needs assessments and surveys
- Excellent, well-thought-out presentation. User-stewardship partners makes so much sense as a starting point. Converting the users into volunteer delivery system is a great idea and gives a sensible place to begin program. I would urge

you to consider putting your collective expertise into a free-media public information program that could be delivered statewide.

- Recommendations are good guideline for the next steps
- Recreation users---HOW do you
- model program at elkhorn sounds great. for it to be considered elsewhere, evaluation of it would be useful.
- Could we work with schools to develop environmental strands through their standard-based curriculum - as dictated by State. Create curriculum units align to new state adopted instructional materials. Environmental education can be a means to makes the standards make sense. Perhaps environmental education can shift the educational system view that currently exists where the standards are the ends to the education. The shift needs to move to standards as being a means to the education.
- Your presentation projects don't seem to have much basis in doing the needs assessment part stated in your conclusions. Don't get locked into stuff you're already doing, look for new opportunities.
- I think that success will depend on linking stewardship messages to environmental justice, health and other community priorities, especially in communities that don't "traditionally" focus on environmental issues. Also focus on individual behaviors - the power of one, both to help and harm the environment.
- HOW do you reach ORV users? Tough group. On Elkhorn,
- Work with local school districts to develop context relevant environmental education. Develop curriculum units that can be modified to match the local environmental concerns around the state.
- On the statement about take only pictures and leave only bubbles...what about fishing, abalone diving, and spearfishing??? Let's be careful about our overall message.
- was there any interest shown by the latino community to become more involved in getting the message out to their community, after the outreach/education done at Elkhorn Slough, i.e. by volunteering?
- i agree with the importance of science standards being integrated, but wonder if it has been overused some places at the expense. The OCEANS research project that monterey aquarium is involved with found no significant change of attitude towards conserving oceans with research group that integrated high info and science concepts as opposed to other group with low level. Are we giving info overload to young kids and not enough nurturing of the heart.
- Well presented - - very similar to outreach presentation. Interested in difference between education and outreach.
- Family---Elkhorn is good
- Biodiversity Atlas should also be positioned for undergraduate GIS and biology courses.
- I think in addition to getting some more science in the schools (many teachers don't do much if anything on science), there should be a major push with Cal Dept Ed to have conservation standards.
- Loved Carol Peterson's presentation, for the strong need to link standards.

- There are groups who help educators tie their curriculum specifically to integrated adherence to standards and No Child Left Behind who could help develop master or template curricula. Adopt-A-Watershed, for one, does this.
- It is all we hear from teachers these days.
- Would love to link Alive! to your program this summer. (CIB)
- ESRI, the company that makes the most popular GIS software in the market has a strong education program and should be approached for funding and cooperation.
- What is the "Just Do It" equivalent in terms of messaging? (e.g., single message, every person, every time) JDI - individual context (means different things to different people) but still outcomes oriented. Flexible enough to cover lots of situations (e.g., sport contexts), ubiquitous and enduring. Not that I know the answer, mind you :)
- Atlas is a fine resource for certain grade levels and disciplines (can you believe CA still looks at curriculum that way?!
- regarding biodiversity curriculum, in formal ed, school district(s) need to be a partner. As for informal centers, so many are struggling that it may be a hard sell for them to take on anything new unless they get compensated for their staff time. I think it's worthy to try, particularly at middle schools, an underserved audience. maybe with statewide web links to learn about how diverse nature is elsewhere in CA as well as their own region.
- Community based Informal Ed is very very effective when done appropriately
- Great concise presentation
- Lots of great ideas
- It will be useful to see where 5th grade tests scores are on science, specifically life sciences.
- Link the concepts of biodiversity and natural history to cultural diversity and cultural, economic and political history.. the Wilderness Arts and Literacy Collaborative (WALC) in SF does a superb job of this. Also, evaluation frameworks are being developed in the Bay Area (through Jack Chin and others) that fra0e
- Thanks to the Education Group---good work! Can we get copies of the presentation?

Collaboration & Governance - Alexia & Kate

General comments on Alexia & Kate's presentation.

- DFG's roles and responsibilities are so diverse. NGOs usually are so issue specific that they may agree with DFG sometimes but cannot be a long standing ally.
- Did you come up with any specific recommendations for outreach to legislators?

- Need to deal with the freeloader problem. Not that it has to be in the form of user fees, but general tax revenue. Problem is that most folks probably don't understand what we do for them.
- Partnerships can help with DFG profile and value to the public
- May need to reinvent DFG that relates to the public
- There are some good models throughout the planet where non-consumptive user fees are well accepted and workable, especially when associated with tourism.
- All educators should be turned into public information officers. Working with small groups won't win the day. Wildlife is what people support. Wildlife and fish need sustainable habitat over time. If you don't change your name, you can't actually develop a campaign for wildlife. No one wants to give you money to kill animals. They don't understand the complexity of the issues. DFG hasn't delivered its value to citizens. Use mass media to deliver your messages to millions.
- Working with partners takes time. How do you facilitate getting managers to encourage this kind of activity?
- yes, tying messages of conservation and biodiversity to local communities, and making it relevant; Not only is dfg invisible in many locations, its not necessarily relevant in other places
- A lot of this is repetitive from the Rancho Jamul meeting. We need from this group more specific recommendations
- Share education staff, also.
- A lack of money isn't the biggest problem. Using it as an excuse is the problem. Go to the Legislature and ask for tasks to be removed if they are unfunded mandates. DFG hasn't been proactive in telling the Legislature its most important work and demonstrating that funding is critical. Too many hats and too many messages don't win the day. The Legislature is made up of city slickers who need briefings and facts to vote responsibly.
- Wildlife corridors? What about backyard wildlife . . .
- Important point brought up by a DFG staffer: Tie needs and funding to critical needs of Californians, e.g., water quality (through indicator species, through economic services conducted by say wetlands to purify our water, etc.).
- wildlife corridors should be required in the development of new housing for the benefit of wildlife and habitat. Then in turn, local residents would have this quality open space (with trails) to connect with as families, for school field trips, etc. People need nature in their lives to appreciate and vote for, and to learn to live with wildlife (water conservation, waste disposal, coyotes, etc) via services of a dfg educator (publications, curriculum, guided activities, signs)
- DFG should focus on wildlife protection and sustainable habitat. Loan experts to the Dept. of Ed, the Dept of Parks, Air Quality Board, Department of Water Resources for content. DFG should not be delivering education programs. It should be providing wildlife and habitat information to all other departments. That would strengthen DFG's hand in building partnerships. Educating a dozen or two people won't win the day. Millions of people need to become engaged to win the day.

- FYI - from a waste reduction agency, our school education programs try to emphasize the connection between consumerism and/or things (needed and wanted) and the resources that provide them. DFG, USFWS, etc. protect resources and make they are there. We see this as a connection between what we do and DFG messages. Not too articulate, but that's the gist.

On day 2, Kate and Alexia introduced a campaign for educating legislators through a variety of approaches. By teaming with the Wildlife on Wednesdays theme, the team suggested that legislative staffers be invited to the events in their area where DFG was leading, directing or participating in activities directly related the wildlife resources and habitat in that location. In addition, the team suggested beginning a briefing program whereby, each quarter, various legislators and/or their staff were briefed on upcoming issues or the status of issues in their district. To further extend the effort, the team suggested a monthly or quarterly connection be made with the County Board of Supervisors (basically the launching point for many of the Assembly and Senate members). The concept is that DFG must be raise awareness among decisions makers regarding DFG's role in the protection, restoration and enhancement of natural resources. As noted that clean water and clean air were critical political issues for the people of California, the education effort would need to demonstrate the connection between healthy habitat and clean water and air.

Day 2 -- Review & Comment on Strategies

High Profile - Strategy 1, Adopt-A-Stream (Nova Scotia, Delta Laboratories, Georgia)Three approaches (natural resources public trust, pollution prevention, training center in aquatic ecology) Target audience: organized community/civic groups, students.

- I think this is could be widely used for almost any resource. Probably the most flexible.
- for this and other special events you have listed , find other events and add a dfg component, at any and all if staffing allows. other events could be cultural events that you add a science and conservation component in a relevant manner to the audience.
- I like the Nova Scotia model best because it is more resource management public trust focused

High Profile - Strategy 2 Day At The Docks (San Diego) Sportfishing industry sponsored one day event directed at recruitment of marine anglers Target Audience: general public, young adults

- This could be very good to support fishing interest and would probably be well supported by the local communities
- easy to do. send a biologist and warden to participate

- This is a great PR move for Fish and Game. Day at the blind/hunter skills, or even bringing the lazer shooting activity to Wildlife festivals and tying to conservation efforts of the traditional outdoorsperson would also be good. As well as info about DFG's involvement in wildlife management in both fishing and hunting situations.
- sportfishing industry should offer one field trip for every 5th or 6th grade class that wants the outing. its in their own long term interests. They should fund a DFG naturalist to train vols to serve as naturalists so the trip isn't merely fishing outing but a conservation education experience as well.

High Profile - Strategy 3 Resource Management Professional Mentoring Day (no example) "Ride-along" for a day with a professional biologist, warden, naturalist, or park ranger sponsored by likes of American Fisheries Society, Wildlife Society, National Assn. for Interpretation, Game Warden Assn. etc. Target Audience: High School and College Students

- American Fisheries Society {National} has a student mentor program
- Not too likley to do much except perhaps for recruiting new employees down the line
- wardens are very reluctant for ride alongs as their work can often put someone else in jeopardy. we've done some mentoring and shadowing before with little reslts (as best as I could see) and serves too few people.
- I like this idea.
- Just do it by partnering with existing career day type program or designate a mandatory ride-along day.
- I couldsee the possibility of this being very popular with a great many people if properly advertised. Assuming it is, how do you not create unrealistic expectations. This has the potential of being too big to handle. I'mready. Sign me up!
- I like the Wednesday workday concept. Sonke could direct the Department's ONRE staff to develop a survey form for each Department warden and biologist to take to local county or city parks and recreation departments, then send them all to Sacto electonically. Put OHRE's thinking cap on to figure which projects could be done quickest and with partners to accomplish meaningful local tasks for the least amount of \$\$. Have Public Affairs do a press release and contact local TV and news papers.
- Don't neglect opportunities for the general public: remember those boomers are looking to learn more.

High Profile - Strategy 4 Adopt-A-Beach/Ocean Day (California)Coastal agency-directed statewide volunteer environmental awareness & cleanup day oriented eventTarget Audience: Schools, Media, Elected Officials, Waste management industry, General Public, Families

- About the same as strategy 1, but with an ocean focus. Very doable with many potential partners. Let's do it now. Could join existing efforts to start showing the dfg face

- Easiest to do to get marine message across. wardens and biologist should go along with seafood industry reps
- This suggestion could be modified somewhat and developed as a volunteer service outing - - similar to the current partnership U.S. Forest Service has with the Sierra Club. How it works: Volunteers actually pay a fee to participate in a trip that is designed to offer an outdoor experience combined with work that needs to be done on a particular wildlife area, etc.
- get the corporations whose merchandise is often seen in litter at beaches to fund these events. Corporate responsibility. Not just funding the day's event, but a longer term strategy such as flashy trash and recycling cans and pick up service, interpretive panels, etc

High Profile - Strategy 5 Adopt-A- Waterway (Think tank concept generated)

Multi-purpose one day event highlighting restoration, monitoring, resource management and recreational opportunities with Watchable Wildlife type interpretive signage plan for sponsors. Potential Sponsors: Recreational equipment and guide services, citizen watershed groups, state & local public trust agencies, waste management industry
Target Audience: General public, watershed support groups, recreational industry

- Plan to do this only if you really have decision maker support at a high level in partner orgs.
- This being multi-purpose, don't shortchange the hunters. Presentations on hunting heritage, food sources and management practices can help turn public opinion around.
- Liked your Fish and Wildlife Wednesday the best!

Outreach - Strategy 1 Awareness Campaign Designed to work in conjunction with a community-based social marketing campaign, an awareness campaign would emphasize the important role California families play in preserving California's natural resources. The primary objective is to increase public understanding, awareness, & support of the California Department of Fish & Game's mission. This campaign is an ideal opportunity to be pro-active rather than reactive, especially as it relates to issues in the media

- This in conjunction with the behavior change campaign is good.
- This is a good broad description that needs more fleshing out of details.
- I repeat, do not emphasize the department in lieu of critters. Focus on organisms, not on organizations. Charisma in fur or fin or whatever, in your posters. Avoid the heavy regulation message
- Yes, need a family focus.

Outreach - Strategy 2 Community-based Social Marketing Designed to work in conjunction with the awareness campaign, a community-based social marketing campaign would be used to promote a specific behavior change amongst California families. This marketing strategy would focus on changing a negative or neutral behavior to promote a positive behavior (ie. pack out what you pack in, leave no trace behind, etc.). The objective is to

encourage stewards of California's natural resources. This type of campaign can be designed to pay for itself, and the overall benefit is for the community

- I think this is close to what Dr. Sheffeld hit on at lunch - get the volunteers involved. Create more avenues for volunteers to make real impacts. What if there were volunteers throughout the state that were dedicated to being media liaisons - they would help bridge the gap between good works by DFG and the media looking for a story.
- I think this idea has merit. It needs to involve a whole diverse array of organizations and agencies to be successful (and have a BIG budget). How will DFG coordinate such an effort? It appears to me that there are structural problems in the dept that need to be addressed first. Right now the communications and educational efforts are dispersed all over the dept and there is a "silo" mentality. Different parts of the dept independently produce posters, fliers, educational campaigns without
- consulting their colleagues.
- Focussing on families is good...provide adventure opportunities in conjunction with awareness messages to make it more attractive.
- This entire group of topics is too general. There needs to be more background done first. What is the primary goal of the department in the area of interest? What is the primary desire of the public in the area? This will vary with the area and the ethnic and economic make-up of the local population. These comments are generally directed at all of the areas and not to this specific Topic. The Department needs to determine its top priority and make a commitment to implementing it
- The Department does have experience doing this kind of market research. Lorna Bernard in Public Affairs has done one award-winning campaign using an outside contractor, and she is currently working on another. I don't know why she hasn't been involved in this process from the beginning.
- I'm Hungry
- The big question is "Is natural resource protection important to the majority of the people of California? If it isn't - then how do we show them that it really is important to them. This is the question that begs an answer!!

Education Outreach Strategy 1 - Recreation Users To address a broad audience of outdoor enthusiasts, a continuing tradition of stewardship may be reinforced by linking the concept of proactive involvement in sustaining resources to perpetuation of recreational opportunities. This educational outreach may be accomplished through such means as a poster campaign on public lands, "infomercials" in peer communications, and the integration of messages in social events.

- I have yet to see an effective poster campaign. Very expensive as well, and very difficult to get community sites willing to place on walls and windows.
- This strategy is already well developed and being implemented. This choir has been preached to extensively

Education Outreach Strategy 2 - Latino/Hispanic Population To address the Latino/Hispanic population, The MERITO bilingual program in place at Elkhorn Slough addresses this target audience with an emphasis on family and community involvement to build stewardship awareness. The concept of watershed is developed and reinforced through after-school programs, adult ESL programs, and special community events.

- I can see the value of doing this in areas with the same demographics as Monterey. In other areas, there needs to be tailor-made actions. In this light, this is a very limited project.
- Got to begin doing this so DFG can begin working with emerging audience

Education Outreach Strategy 3 - Marine Education To address the formal education audience, concepts of marine biological diversity and fishery management challenges may be communicated through materials that facilitate access to this curriculum. Publications can be created that outline marine concepts and resources linked to state education content standards. Diverse means for dissemination of materials may be considered, including the CREEC network, teacher in-services, distance learning, and site facilities.

- Yes, assign dFG educator to this as a priority
- All approaches to K-12 curriculum need to begin with alignment with State Content Standards. Consider researching the current adopted K-8 textbooks to map the route (ie lessons) teachers would teach at specific grade levels to reinforce the "marine education "concepts presented in the textbooks. The CREEC Network could convene a series of "High quality" regional workshops that helped teachers do curriculum mapping with follow up assistance throughout the year.
- The public does not understand the ocean. The more effort here the better.

Education Outreach Strategy 4 – DFG Biodiversity Atlas To address the formal education audience, refine maps and text from existing Atlas of the Biodiversity of California as the basis for a biodiversity curriculum that reinforces education content standards (including map-reading skills) for students in grades 6 - 12. Partner with State Parks to promote access and use of state lands, and with California Institute for Biodiversity (Coast Alive), and others to produce teacher workshops with a bioregional educational focus.

I agree that educational services are needed at the secondary level. Getting in the door with schools facing such serious social and academic problems is a challenge. Assessment of this pilot is important to market it to other districts that are willing to consider.

Education Outreach Strategy 5 - Biodiversity Education (Non-formal Ed) To address the non-formal education audience, development of non-formal biological diversity-based education models for interpretive centers and museums may be considered. Such effort could broaden the age ranges for curriculum use and expand stakeholders to include partners such as World Wildlife Fund.

- This one really resonates, as it is an overriding topic for DFG, and for all of us. How to interest kids, GenYs, foreign-born, metropolitan families, single adults: make it very visual, very fun. Make it immediate. Incorporate great activities, put it in the language of the user, use technology, put it on the web, use flash animations. Using biodiversity: it can be natural history, it can be ecology or geology or recycling. Work from particulars, not from generalities; make it magical, use
- get message to centers. Have ed. staff CRAFT AND DELIVER as replicatable model
- I think so many kids are missing more basic concepts than biodiversity and thus are not ready to handle this however, , but for those that are ready for it, making it culturally relevant is important. I don't recall biodiversity being in the standards. If not, it should be.
- Many organizations, such as museums and aquariums, has a great deal of experience making scientific informations accessible and interesting to the general public. How could they be brought in as partners to help DFG spread the message?

New Ideas Generated by the Participants on June 2

- ◆ Legislative campaign approach—Educate & keeping apprised of what's happening in DFG
- ◆ Atlas—legislative fact sheet & outreach information
- ◆ Using the arts to deliver the message (film festival)
- ◆ Surveying our target audiences
- ◆ Higher presence at community events (ethnic cultural involvement) –can be combined with “Wildlife Wednesdays”

Next Steps

Which ideas and recommendations are ones your agency is already doing to some extent?

- We are already doing some marketing regarding statewide issues. This relates to doing surveys, target audiences, etc.
- Adopt-A-Watershed fosters connections in communities between educators, resource managers, and community groups, then supports the development of these connections into long-term relationships that result in actions that meet the needs of all involved.

What is already being done locall/statewide?

L—Latino/Hispanic Education, Elk Grove

S—River of Words

S—Wild Bear (awareness camp)

S—Bio-Div. Ed.—Atlas—tool

S—Heritage Trout

L—Crestridge ER

Goodness of Hunting—awareness

S—Fishing In the City

S—Youth in the outdoors

S—Guide to hunting

S—Hunter ed. Prog.

S—Site based rec. Services

Awareness—Nimbus Display (Interp. Exhibits)

Wildlife Wed—Festivals—

What partnership opportunities exist?

- ❑ **Bio-Diversity Atlas-CA W.L. Found-distributed widely**
- ❑ CA Teachers—Atlas-order form
- ❑ Web site-order info Atlas.dfg.ca.gov
- ❑ DFG Locals. W. Wed.-all the same idea—short term visible

What funding opportunities exist to support these ideas?

Bio-diversity Atlas

Partners—W. Life Found.
Nat. F. & W. Found.
River of Words—
(Dissemination)

Connection with community in adopt a Watershed program

Action Items

- ❑ List specifics that need to be done with partners
- ❑ Back to think tanks for next steps
- ❑ DFG Ed. Advisory Committee info

The Think Tank Groups & Education Advisory Committee will review this report and make their recommendations to leadership, based on participant feedback.

As an appendix to this report, the work groups have provided further clarification to participant responses during the summit. Feel free to contact the appropriate facilitators with any further comments or suggestions you may have.

Thank you for your willingness to share ideas and partnership opportunities!

APPENDIX

OUTREACH

The work group also wanted to share a list of strategies they considered but did not present at the summit.

Outreach Implementation Strategies

Public Service Announcements

Billboards

Awareness Campaigns

Personal Contacts/Word of Mouth

PBS Special (Video)

Selling additional fishing licenses

Open house days for public to see what we do

Expanding volunteer opportunities in DFG & other

Create win-win strategies with other agencies that target families

Outreach booth at festivals & other large events

Community-based Social Marketing Campaign

Professional development for staff in cultivating relationships with local media (become proactive instead of reactive).

EDUCATION

The work group wanted to clarify points made during their presentations as a response to feedback gathered at the summit.

Education Outreach Strategy 1 - Recreation Users. **To address a broad audience of outdoor enthusiasts, a continuing tradition of stewardship may be reinforced by linking the concept of proactive involvement in sustaining resources to perpetuation of recreational opportunities. This educational outreach may be accomplished through such means as a poster campaign on public lands, "infomercials" in peer communications, and the integration of messages in social events.**

The poster campaign speaks to the general public more than to the recreational user, though there would be some crossover. It was envisioned for use at public sites, where multiple use occurs. It will represent the variety of outdoor recreation users and provide a positive image for them, emphasizing their involvement in conservation efforts. This also lends itself to increasing credibility of the agency directly with these user groups in the future.

While recreation users have traditionally heard and heeded conservation messages, this audience and specific messages are not static. New recreationists join the ranks all the time, and seasoned participants need not only a reminder regarding outdoor behaviour, but encouragement to participate actively in conservation efforts.

Educating outdoor guides in the education process would be a great way to multiply efforts, providing them with useable knowledge, and passing the message on to their clients. This also ties in to empowering volunteers and other mentors to pass on good practices in outdoor recreation use.

Volunteers in outdoor recreation pursuits love what they do and generally love to share about it. Training them in conservation issues to be included in mentoring or skills clinics situations would help multiply efforts to communicate conservation messages to all recreation users. The messages to recreational users relate to continuing a tradition (in many cases) of supporting conservation efforts, and practicing ethical use when interfacing with the resource.

Partnering between agencies, non-governmental organizations and private sector institutions can take several forms. Some possibilities include the following:

- Sharing staff time, skills and other resources to produce and disseminate educational materials. The Junior Duck Stamp program involves state and federal agencies and NGO's in
- Sharing staff time, skills and other resources to produce events: Agencies and NGO's work together to develop skills clinics, training opportunities, social events and other outreaches to impact this audience.
- Sharing information, both within and without. Knowing that somebody in a state agency is working on an issue of importance to us as a non-profit can provide an opportunity to partner. We can make our membership aware of those efforts, and combine resources (sometimes including volunteers) to be more efficient. Conversely, people involved in work with agency programs as volunteers may also enjoy some of our efforts.
- The Youth in the Outdoors Committee, which will be under the AI Taucher committee umbrella, provides a good model for partnership planning. Representatives from Fish and Game, Fish and Wildlife, California Waterfowl Association, Pheasants forever, Ducks Unlimited, Sierra Club, Audubon, etc....draw together to discuss ways and plan programs for getting the youth of California out into the outdoors to learn and enjoy.

Most recreational users have peer communication instruments of some sort, even minimally a magazine or web site. They also have the motivation to provide for continuing resource use for their recreational activity. These two facts can be combined to create and disseminate messages to reach even the hardest sectors of this audience, such as the off-road vehicle user.

Education Outreach Strategy 2 – Latino/Hispanic Population

This strategy is a model that has features that can be applied to many other areas in the state.

- Audiences/venues: The Hispanic and other non-English speaking members of our communities can be reached through existing afterschool programs, adult ESL courses and community events.
- Content: Understanding the concept of watershed and the importance of having clean water for ourselves and for wildlife is critical anywhere in California. Every community has a water supply, a water treatment facility, recycling/landfill facility, and some public open space nearby to provide opportunities for field experiences.
- Partnerships: DFG can partner with State Parks throughout California to implement this program. Other partners will vary depending on the area. The National Marine Sanctuary program, (with Monterey Bay, Channel Islands, Gulf of the Farallones and Cordell Bank NMS), and the National Estuarine Research Reserve program, (with Elkhorn Slough, Tijuana and San Francisco Bay NERRS), offer partnerships that would apply for many areas along the coast.
- Evaluations of the different components of the program are being carried out by the MERITO staff at the Monterey Bay National Marine Sanctuary. The afterschool classes take pre and post tests to assess changes in knowledge and attitude. Surveys are being conducted at the Elkhorn Slough visitor center to assess changes in the demographics of our general public visitation.

Education Strategy 3 [Marine Biodiversity]

Crreate a reference matrix for K–12 educators showing alignment of marine biodiversity concepts and fishery management challenges to existing state content standards. Also link these correlations to units/chapters in specific state-adopted textbooks and specific marine resources—field and service learning opportunities, live web cams, marine inventorying and monitoring data, etc. Diverse means for dissemination of materials may be considered, including the CREEC network, teacher in-services/regional workshops, distance learning, and site facilities.

- DFG is currently working with Cal EPA and California Integrated Waste Board Management in development of environmental principles and related fish and wildlife concepts for use with California students as part of AB1548. Development of all materials for marine education will take into account the most up-to-date information and guidelines available.
- This reference should be available both online and as a hard copy. The format could even be an educational poster that includes a matrix on the back showing how to teach specific marine concepts within the current state content standards.

- Other groups could help develop master or template curricula for marine concepts. Adopt-A-Watershed, for one, does this.
- ESRI, the company that makes the most popular GIS software in the market, has a strong education program and should be approached for funding and cooperation (Note: ESRI is mentioned in matrix developed by this work group).

Education Strategy 4 [Aquatic Biodiversity (Formal Ed)] [Original title for strategy proposing adaptation of *DFG Biodiversity Atlas* for use in formal education]

It is important to note that Education Strategy 4 [Aquatic Biodiversity (Formal Ed)] evolved significantly during the course of the Summit. The strategy for adapting DFG's Biodiversity Atlas for use with intermediate and high school students benefited from dialogue that took place between partners attending the Summit.

Some of the key tenets of change include:

- *Refine maps and text from the existing Atlas (for terrestrial and aquatic taxa) as a complementary project to Coast Alive, a biodiversity/science curriculum that partners are currently developing for the south coast bioregion*
- *DFG efforts will reinforce state education content standards and also provide conservation messages that promote an understanding of the resource management issues critical to maintaining biodiversity of species in California*
- *Partner with State Parks to promote access and hands-on use of regional DFG lands and state park sites in conjunction with this project, and with California Institute for Biodiversity (Coast Alive) and others to produce a series of training workshops for south coast teachers in winter of FY '04/05*
- *With a successful initial pilot, the bioregional educational program has the potential to expand to central and north coast regions, and from there to inland bioregions*

In response to comments, DFG is currently working with Cal EPA and California Integrated Waste Board Management in development of environmental principles and related fish and wildlife concepts for use with California students. Development of all materials for biodiversity education will take into account the most up-to-date information and guidelines available.

Biodiversity and management for sustainable communities (of people and wildlife) are seen as umbrella concepts that can be developed through presentation of discreet information about species and habitats. Comparing mapped data from the Atlas is invaluable for this purpose. In collaboration with State Parks, concepts of biodiversity and natural history may also be linked to cultural diversity and cultural, economic, and political history.

Use of biodiversity education materials with universities and colleges can be targeted through teacher credentialing programs.

Education Outreach Strategy 5 - Biodiversity Education (Non-formal Ed)

To address the non-formal education audience, development of non-formal biological diversity-based education models for interpretive centers and museums may be considered. Such effort could broaden the age ranges for curriculum use and expand stakeholders to include partners such as World Wildlife Fund.

The following are responses to questions and issues raised during the Summit:

Employing the best practices in environmental interpretation, i.e., relating the concept of biological diversity to the visitors' everyday experiences, will help ensure that the concept is presented in a meaningful way -- as a tangible, easily understood idea rather than an abstract issue.

Further, biological diversity has been identified as a key strand in the development of environmental principles and concepts in AB 1548, the Education and the Environment Initiative. What this means for DFG is that a mechanism ultimately will be in place in the formal education setting to help reinforce that which is presented in the nonformal setting.

Many institutions, including World Wildlife Fund, Smithsonian Institution (SITES), and the California Institute for Biodiversity already have traveling exhibits or/and support material for exhibits. We see the task ahead as identifying (and possibly modifying) existing resources rather than creating new.